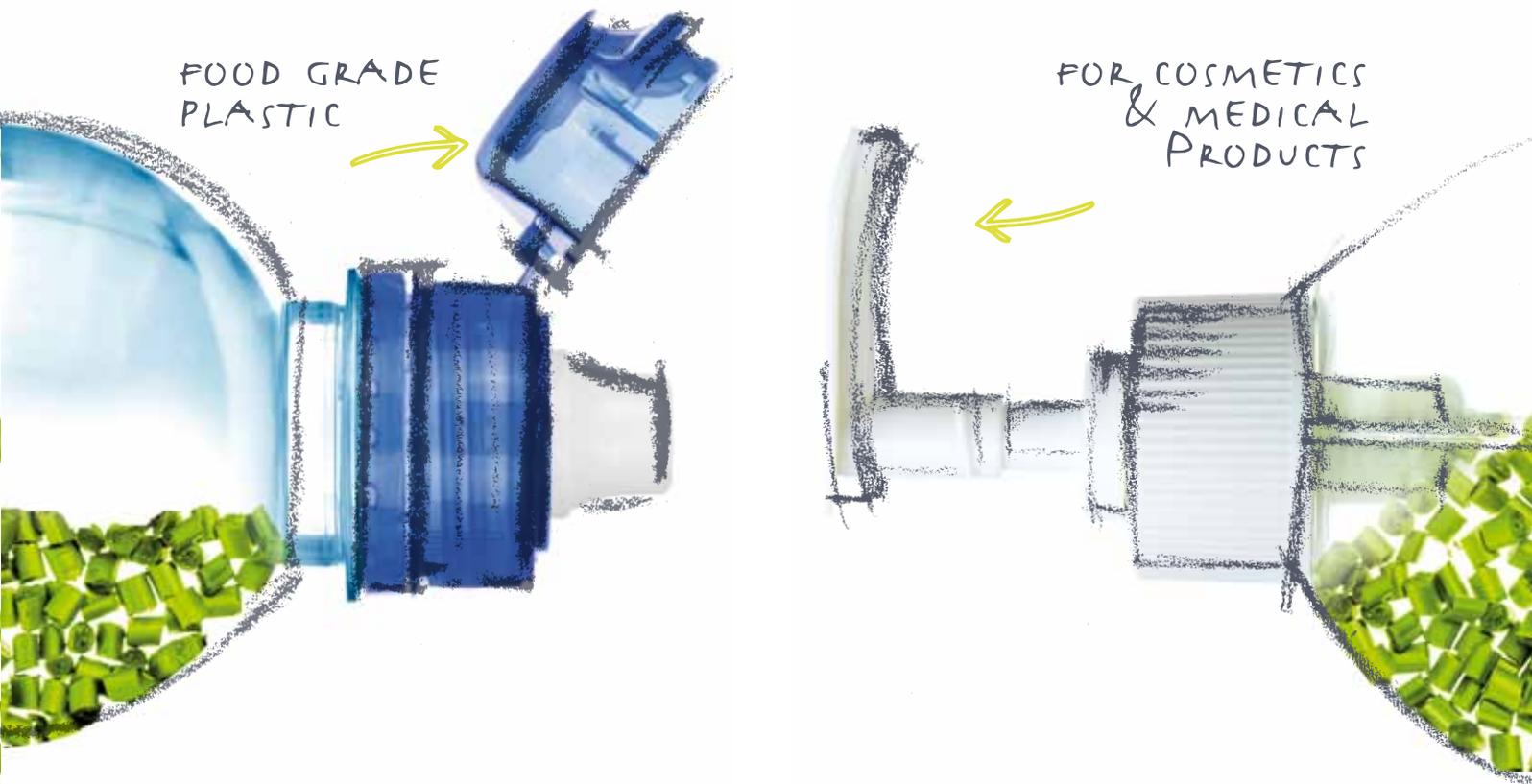


BRINGING LIFE  TO PLASTICS

# CAPS & Closures





# CAPS & CLOSURES

An average bottle cap weighs about 2 grams and is a mass-produced product. At the same time, it is also a high-precision, high-tech product and a milestone in the development of plastic packaging.

For decades we have worked on the development of colour and additive masterbatch for caps and closures made from polyolefins with the highest requirements on dimensional accuracy and process safety. Our many years of expertise have made us both a leading provider of colouring and additive concentrations for bottle closures and an accredited supplier to the world's leading closure manufacturers. Leading machine and mould makers recommend masterbatch from Gabriel-Chemie.



LASERMARKABLE

FOR HIGH PERFORMANCE



**PLASTIC CLOSURES ARE SUBJECT TO THE MOST STRINGENT REQUIREMENTS, ESPECIALLY IN THE AREA OF FOOD PACKAGING. APART FROM THEIR OBVIOUS SUITABILITY FOR USE UNDER FOOD LAW, MANY OTHER PARAMETERS ARE CRUCIAL:**

- \_ Homogeneous dyeing and exact colouring
- \_ High dimensional stability to ensure the density and defined opening forces
- \_ No sensory impact on the end product thanks to careful selection of the raw material
- \_ Compliance with all statutory requirements for everyday objects that come into direct contact with food

**BY COMPLYING WITH STRICT QUALITY ASSURANCE GUIDELINES,** we guarantee the consistent quality and seamless traceability of our products: from sampling to first delivery and the processing of subsequent orders. Numerous customer audits have confirmed this on multiple occasions. Our closures made with masterbatch reliably protect your customers' valuable foodstuffs, whether mineral water from the Alps or precious cooking oil.



### Dimensional stability

Polyolefins are partially crystalline plastics, whose internal structure is described with the term 'morphology'. Apart from physical processes - such as the cooling rate - the structure also depends on the dyes used. Pigments therefore affect the morphology of the polymers in various ways and hence also affect the shrinkage behaviour. These influences are more critical in polyethylene than in polypropylene and also depend on the process parameters and the tool shape. We have spent many years on development and collaboration with our customers, building up the extensive expertise required to maintain the tight dimensional tolerances of the closures.

### Organoleptics

The requirements and sensitisation of the market in respect of sensory product properties are constantly increasing. Improved analytics enable the smallest quantities of contained substances to be found and lead to ever higher expectations on the part of consumers, even when all statutory and hygienic limits are lower than required by several orders of magnitude. We have dealt with this important task seriously and for many years, and continue to develop in order to be able to adequately meet the increasing requirements for organoleptics.

### Approval under food law

Our products are formulated in compliance with food law provisions in Europe and around the world and confirmed accordingly in our declarations of conformity. We are able to issue all other required or requested product documentation as necessary after a separate test has been conducted.

PERFECTLY SEALED





FUNCTIONAL



#### OTHER ADDITIVES

Depending on the requirement and the packaging system, we offer additional additives. We possess extensive knowledge of the ways in which additives and pigments interact. We recommend either dye/additive masterbatch as a combination solution or develop a customised formulation.

- \_ Lubricant to simplify opening behaviour
- \_ Oxygen scavenger to increase the shelf life of the food product
- \_ Laser additives for permanent labelling
- \_ Protec additive for protecting against plagiarism



## OTHER CLOSURES

In addition to food, drink and cosmetics packaging, our masterbatch is also used for the production of closures for industrial packaging, medicine packaging and the packaging of everyday items.

Consumers come into contact with items made from our masterbatch every day through a wide range of end products. From shampoo to floor cleaner and fuel canisters to alcoholic drinks and soft drinks, it is impossible to imagine our everyday lives without this high-tech product.

**IN THE AREA OF COSMETICS CLOSURES**, big-name cosmetics manufacturers from all price segments trust in us. Apart from re-ordering the exact same colour, a perfect, streak-free dispersion is essential. Depending on the trend, high-quality effect masterbatch made with marble or metallic pigments can also be used. If additional decorative or functional elements are required, our laser additive is the first choice for high-quality, permanent markings.

**BUSINESS UNITS OF GABRIEL-CHEMIE GROUP:**



Building & Agriculture



Home & Lifestyle



Packaging for Industrial & Consumer Goods



Cosmetics Packaging



Food & Beverage Packaging



Medical



**GABRIEL-CHEMIE**  
GROUP

GABRIEL-CHEMIE Gesellschaft m. b. H.

Industriestraße 1

2352 Gumpoldskirchen

Austria

Tel. +43 2252 636 30 0

Fax +43 2252 627 25 0

info@gabriel-chemie.com

[WWW.GABRIEL-CHEMIE.COM](http://WWW.GABRIEL-CHEMIE.COM)